

SHEET 1 OF 4

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. UC088.1CPC1CPT	APPLICATION NO. 09/865,291
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (USE SEVERAL SHEETS IF NECESSARY)		APPLICANT Roger Y. Tsien et al.	
		FILING DATE May 24, 2001	GROUP 1845

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SEP 03 2002

## U.S. PATENT DOCUMENTS

TECH CENTER 1800/2800

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
RBK	1.	4,314,936	02/09/1982	Yaron et al.			
	2.	5,264,583	11/23/1993	Huse			
	3.	5,491,084	02/13/1996	Chalfie et al.			
	4.	5,599,906	02/04/1997	Dasmahapatra			
	5.	5,602,021	02/11/1997	Davis et al.			
	6.	5,605,809	02/25/1997	Komoriya et al.			
	7.	5,614,191	03/25/1997	Puri et al.			
	8.	5,625,048	04/29/1997	Tsien et al.			
	9.	5,912,137	06/15/1999	Tsien et al.			
	10.	5,961,200	11/09/1999	Tsien et al.			
	11.	5,998,204	12/07/1999	Tsien et al.			
	12.	6,197,928	03/08/2001	Tsien et al.			
RBK	13.	6,248,550	06/19/2001	Tsien et al.			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
RBK	14.	AU 717873	04/06/2000	Australia				
	15.	EP 0 877 805 B1	05/06/2002	Europe				
	16.	EP 0 429 000 A1	05/22/1991	Europe				
	17.	WO 91/01305	02/07/1991	PCT				
	18.	WO 94/28186	12/08/1994	PCT				
	19.	WO 94/28173	12/08/1994	PCT				
	20.	WO 95/07463	03/16/1995	PCT				
	21.	WO 95/21191	08/10/1995	PCT				
RBK	22.	WO 96/13807	05/09/1996	PCT				

EXAMINER <i>Richard B. Kaput</i>	DATE CONSIDERED <i>3/17/04</i>
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

SHEET 2 OF 4

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. UC089.1CPC1CP1	APPLICATION NO. 09/865,291
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		<div style="text-align: right; font-size: 2em; font-weight: bold;">RECEIVED</div>	
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">             OIPE              AUG 20 2002              PATENT &amp; TRADEMARK OFFICE           </div>		<div style="text-align: right;">SEP 03 2002</div>	
(SEE SEVERAL SHEETS IF NECESSARY)		APPLICANT Roger Y. Tsien et al.	GROUP 1645
FILING DATE May 24, 2001		TECH CENTER 1600/2900	

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
RBY	23.	WO 96/23810	08/08/1996	PCT ✓				
	24.	WO 96/23898	08/08/1996	PCT ✓				
	25.	WO 96/27027	09/06/1996	PCT ✓				
	26.	WO 96/27675	09/12/1996	PCT ✓				
	27.	WO 97/11094	03/27/1997	PCT ✓				
	28.	WO 97/28281	08/07/1997	PCT ✗				
RBY	29.	WO 98/40477	09/17/1998	PCT ✓				

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
RBY	30.	Baird <i>et al.</i> , "Circular Permutation and Receptor Insertion within Green Fluorescent Proteins" <i>Proc. Natl. Acad. Sci., USA</i> , 96:11241-11246, 1999
	31.	Blumenthal, in "Peptides and Protein Phosphorylation" (Kemp, ed; CRC Press 1990), pages 135-143
	32.	Chalfie <i>et al.</i> , "Green Fluorescent Protein as a Marker for Gene Expression," <i>Science</i> 263:802-805 (1994)
	33.	Cubitt <i>et al.</i> , "Understanding, Improving and Using Green Fluorescent Proteins," <i>Trends In Biochemical Sciences</i> 20:448-455 (1995)
	34.	Delagrave <i>et al.</i> , "Red-Shifted Excitation Mutants of the Green Fluorescent Protein," <i>Nature Biotechnology</i> 13(2):151-154 (1995)
	35.	Ehrig <i>et al.</i> , "Green-Fluorescent Protein Mutants with Altered Fluorescence Excitation Spectra" <i>FEBS Letters</i> 367:163-166 (1995)
	36.	Geoghegan <i>et al.</i> , "Site-Directed Double Fluorescent Tagging of Human Renin and Collagenase (MMP-1) Substrate Peptides Using the Periodate Oxidation of N-Terminal Serine. An Apparently General Strategy for Provision of Energy-Transfer Substrates for Proteases" <i>Bioconjugate Chemistry</i> 4(6):537-544 (1993)
	37.	Giuliano <i>et al.</i> , "Fluorescent Protein Biosensors: Measurement of Molecular Dynamics in Living Cells," <i>Annual Review of Biophysics and Biomolecular Structure</i> , 24:405 (1995)
	38.	Heim and Tsien, "Engineering Green Fluorescent Protein for Improved Brightness, Longer Wavelengths and Fluorescence Resonance Energy Transfer," <i>Current Biology</i> 6(2):178-182 (1996)
	39.	Heim <i>et al.</i> , "Wavelength Mutations and Posttranslational Autoxidation of Green Fluorescent Protein" <i>Proceedings of the National Academy of Sciences of USA</i> , 91:12501-12502 (1994)
	40.	Heim <i>et al.</i> , "Improved Green Fluorescence" <i>Nature</i> 373:663-664 (1995)
RBY	41.	Heim, "Green-Fluorescent Protein Forms for Energy Transfer" <i>Methods Enzymol.</i> , 302:408-423 (1999)

EXAMINER	Ramuel B. Kaput	DATE CONSIDERED	2/17/04
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.			

SHEET 3 OF 4

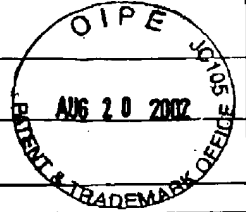
FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. UC089.1CPC1CP1	APPLICATION NO. 09/885,291
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		<div style="text-align: center; font-size: 2em; font-weight: bold;">RECEIVED</div>	
		<div style="text-align: center; font-size: 1.5em;">SEP 03 2002</div>	
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">             OIPE JCI06 AUG 20 2002 PATENT &amp; TRADEMARK OFFICE           </div>		APPLICANT Roger Y. Telen et al.	GROUP 1645
USE SEVERAL SHEETS IF NECESSARY)		FILING DATE May 24, 2001	TECH CENTER 1600/2900

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
RBF	42. Inouye and Tsuji, "Aequorea Green Fluorescent Protein: Expression of the gene and fluorescence characteristics of the recombinant protein," <i>FEBS Letters</i> 341:2(03):277-280 (March 21, 1994)
	43. Kain et al., "Green Fluorescent Protein as Reporter of Gene Expression and Protein Localization," <i>Biotechniques</i> 19(4):650-655 (1995)
	44. Kemp and Pearson, "Protein Kinase Recognition Sequence Motifs" <i>Trends Biochem. Sci.</i> , 15:342-346 (1990)
	45. Knight, "Fluorimetric Assays of Proteolytic Enzymes" <i>Methods in Enzymology</i> 248:18-34 (1995)
	46. Krafft et al., "Synthetic Approaches to Continuous Assays of Retroviral Proteases," <i>Methods Enzymol.</i> , 241:70-86 (1994)
	47. Lee et al., "A Requirement of Hydrophobic and Basic Amino Acid Residues for Substrate Recognition by Ca <sup>2+</sup> /calmodulin-dependent protein kinase Ia," <i>Proc. Natl. Acad. Sci., USA</i> , 91:6413-6417 (1994)
	48. Matayoshi et al., "Novel Fluorogenic Substrates for Assaying Retroviral Proteases by Resonance Energy Transfer," <i>Science</i> , 1990, 247:954
	49. Meredith et al., "Measurement of Kinase Activation in Single Mammalian Cells," <i>Nat. Biotechnol.</i> , 18(3):309-312 (2000)
	50. Mitra et al., "Fluorescence Resonance Energy Transfer between Blue-Emitting and Red-Shifted Excitation Derivatives of the Green Fluorescent Protein," <i>Gene</i> 173(1):13-17 (1996)
	51. Nagai et al., "A fluorescent indicator for visualizing cAMP-induced phosphorylation in vivo," <i>Nat. Biotechnol.</i> , 18(3):313-316 (2000)
	52. Pearson and Kemp, "Protein Kinase Phosphorylation Site Sequences and Consensus Specify Motifs: Tabulations" <i>Meth. Enzymol.</i> , 200:62-81 (1991)
	53. Persechini et al., "Novel Fluorescent Indicator Proteins for Monitoring Free Intracellular Ca <sup>2+</sup> " <i>Cell Calcium</i> , 22:209-216 (1997)
	54. Roth, "Purification & Protease Susceptibility of the Green-Fluorescent Protein of Aequorea with a Note on Hlistaura" Thesis from the Graduate Program in Biochemistry from Rutgers, the State University of New Jersey (1985)
	55. Schlessinger, "Novel Fluorescent Approaches for Studying Cell Signaling in Single Cells," <i>Nat. Biotechnol.</i> , 18(3):262-263 (2000)
	56. Selvin, "Lanthanide-Based Resonance Energy Transfer" <i>IEEE J. Sel. Top. Quant. Electron</i> , 2:1077-1087 (1996)
	57. Songyang et al., "Use of an Oriented Peptide Library to Determine the Optimal Substrates of Protein Kinases," <i>Current Biology</i> , 4:973-982 (1994)
	58. Tsien et al., "FRET for Studying Intracellular Signalling," <i>Trends Cell Biol</i> , 3:242-245 (1993)
	59. Tsien, "The Green Fluorescent Protein" <i>Ann. Rev. Biochem</i> 67:509-544 (1998)
	60. Ward et al., "An Energy Transfer Protein in Coelenterate Bioluminescence" <i>Jour. Biol. Chem.</i> , 254(3):781-788 (1979)
	61. Wu and Brand, "Resonance Energy Transfer: Methods and Applications," <i>Analytical Biochemistry</i> 218:1-13 (1994)
RBF	62. Yaron et al., "Intramolecularly Quenched Fluorogenic Substrates for Hydrolytic Enzymes," <i>Analytical Biochemistry</i> , 95:228-235 (1979)

EXAMINER <i>Rachel B. Kapur</i>	DATE CONSIDERED * <i>3/17/04</i>
<small>*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 608; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.</small>	

SHEET 4 OF 4

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (USE SEVERAL SHEETS IF NECESSARY)	ATTY. DOCKET NO. UC089.1CPC1CP1	APPLICATION NO. 09/86281
	APPLICANT Roger Y. Tsien et al.	SEP 03 2002 TECH CENTER 1600/2900
	FILING DATE May 24, 2001	GROUP 1645



EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
RBK	63. Confidential (i.e., non-public) communication re. Sato <i>et al.</i> manuscript draft entitled "Fluorescent indicators for imaging protein phosphorylation in single living cells," received by Applicants about, but not before, January 18, 2001. The manuscript was subsequently published in <i>Nature Biotechnology</i> , 20:287-294 (March 2002).

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EXAMINER <i>Rachel B. Kapur</i>	DATE CONSIDERED <i>3/17/04</i>
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